

ABSTRACT OF THE DISCLOSURE

1 A system apparatus, means and method for controlling a
plurality of variable reflectance mirrors (or mirror
5 segments), including a rearview mirror and side view
mirrors, which change their reflectance level in
response to a plurality of drive voltages applied
thereto, for controlling the vehicle lighting system
and for monitoring a vehicle interior for an automotive
10 vehicle. The system includes a light sensing device
and a control circuit formed as a single VLSI CMOS
circuit. The light sensing device comprises a
photosensor array having a field of view encompassing a
vehicle interior. The logic and control circuit
15 determines a background light signal from photosensor
element signals generated by the photosensor elements
in the photosensor array indicative of light levels
incident on the photosensor elements. The circuit also
determines a peak light signal in three different zones
20 or sub-arrays of the photosensor array. The zones or
sub-arrays may correspond to three mirrors or mirror
segments. The peak light signals in each of the zones
and a common background light signal are used to
determine independent and separate control signals,
25 which are then output to separate mirror drive circuits
for independently controlling the reflectance level of
the rearview mirror and the left and right side view
mirrors, or alternatively the segments of a mirror.
The logic and control circuit uses the background light
30 signal to control the vehicle lighting system. The
logic and control circuit also determines a vehicle
intrusion condition if there is movement within the
vehicle in a vehicle intrusion detection mode of the
vehicle interior monitoring system. The logic and
35 control circuit also stores image data in memory in the
compartment image data storage mode of the vehicle
interior monitoring system.